

OC-2973/1.0

# **Ethernet ISA 10/100 Adapter** **Ethernet MCA 10/100 Adapter**

Guide to Operations

olicom



# **Ethernet ISA 10/100 Adapter Ethernet MCA 10/100 Adapter**

## **Guide to Operations**

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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

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We        Olicom A/S  
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            DK-2800 Lyngby  
            Denmark

declare under our sole responsibility that the products

OC-2375 Ethernet ISA 10/100 Adapter

OC-2335 Ethernet MCA 10/100 Adapter

to which this declaration relates, is in conformity with the following standards or other normative documents:

EN 50082-1/1992

EN 55022/1987

EN 60950/1992 + A1/1993 + A2/1993

following the provisions of 89/336/EEC Directive and 73/23/EEC Directive.

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## About this manual

This Guide to Operations is directed towards users without prior knowledge of network adapter installation, and it provides all the information required to perform a standard installation of the Ethernet 10/100 Adapters.

This guide contains nine chapters and three appendices. Reading the sections that deal with the environment in which your adapter will be used will ease installation of the hardware and software described in this guide.

**Chapter 1** is a general introduction to this manual.

**Chapter 2** provides an installation overview

**Chapter 3** describes the physical installation (hardware).

**Chapter 4** shows how to configure/reconfigure the Ethernet 10/100 Adapters

**Chapter 5** introduces the diagnostic program.

**Chapter 6** provides guidelines for installation of the adapter driver software in different network environments.

**Chapter 7** introduces the utility programs.

**Chapter 8** provides troubleshooting hints.

**Chapter 9** tells how to get in contact with Olicom Technical Support.

**Appendix A** contains a list of abbreviations.

**Appendix B** contains error messages, return codes and suggested actions to recover from an error condition.

**Appendix C** lists the technical specifications and certifications

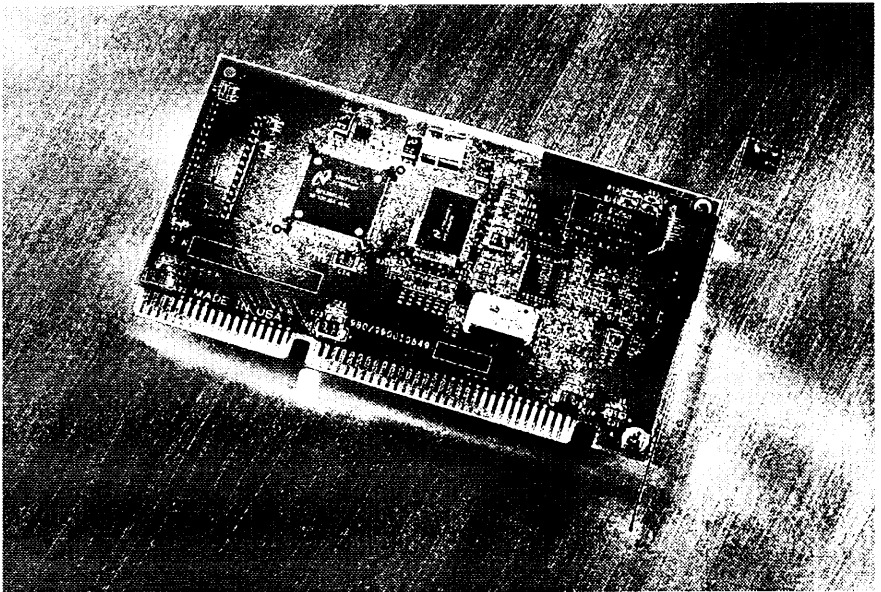
Expert users and end-users who need detailed technical information can obtain this from Olicom's on-line documentation. The on-line documentation can be accessed from the DOS and Windows platforms.



# 1. Introduction

The OC-2375 Ethernet ISA 10/100 Adapter features easy installation, high frame transfer rates, and low latency. The adapter has a UTP RJ-45 connector for 100Base-TX and 10Base-T cabling, and includes software-detectable network speed, 10 or 100 Mbps. The OC-2375 adapter supports Plug and Play (PnP), making installation in PnP-compliant machines even easier.

All major Network Operating Systems are supported, and for standard operating modes, no configuration input is required from the user. The OC-2375 adapter is shown in Figure 1.

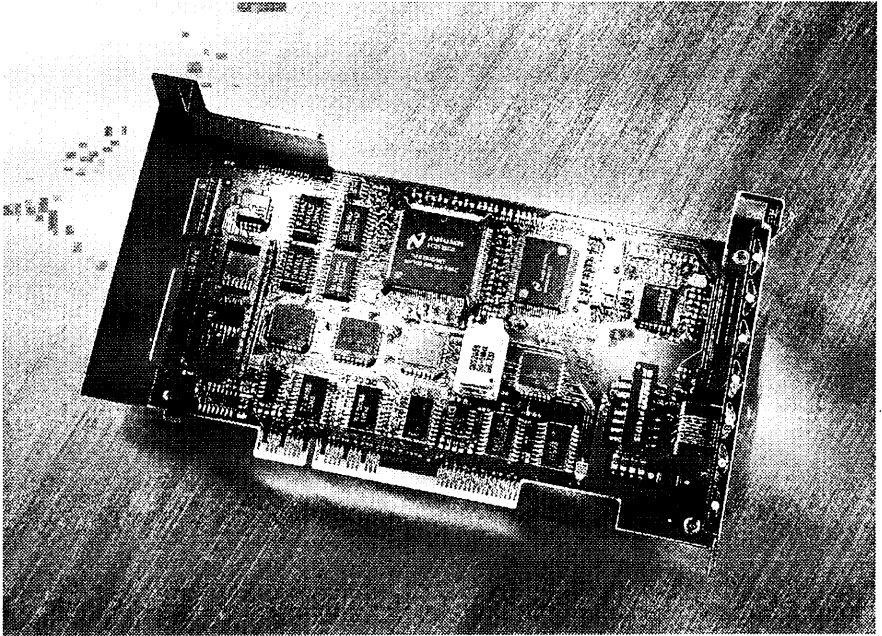


**Figure 1. Ethernet ISA 10/100 Adapter**

The OC-2335 Ethernet MCA 10/100 Adapter is designed for machines complying to the Micro Channel Architecture specification. The OC-2335 adapter features easy installation, high frame transfer rates and low latency. The adapter has a UTP RJ-45 connector for 100Base-TX and 10Base-T cabling, and includes software-detectable network speed, 10 or 100 Mbps.



All major Network Operating Systems are supported, and for standard operating modes, no configuration input is required from the user. The OC-2335 adapter is shown in Figure 2.



**Figure 2. Ethernet MCA 10/100 Adapter**

## Package Contents

- Ethernet ISA 10/100 Adapter, OC-2375 (figure 1) or Ethernet MCA 10/100 Adapter, OC-2335 (figure 2)
- Four disks:  
 Olicom Setup Disk - Disk 1  
 Olicom NetWare Client Disk - Disk 2  
 Olicom Driver Disk - Disk 3  
 Olicom Diagnostics Disk - Disk 4
- This Guide to Operations, OC-2973
- A warranty card



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## On-line Documentation

This Guide to Operations contains all the information required for a standard adapter installation with default settings. However, if the installation is more complex, or if more information is needed, the Olicom on-line documentation provides access to extensive information complementing that given in this manual. The on-line documentation is available under both DOS and Windows. Insert the Setup Disk (Disk 1) in drive "A:" and execute the following command:

A:SETUP

---

## Troubleshooting and getting Help

If the Olicom Ethernet 10/100 Adapter should perform unexpectedly, see chapter 9, *Getting in Touch with Technical Support*, for technical assistance.

---

## Late-Breaking News

Additional and/or corrective information not available at the time of print is contained in the on-line documentation: *Late-breaking News*.

---

## Diskette Backup

Before performing any task, make copies of all the Olicom diskettes and store the originals in a safe place. Use, for example, the diskcopy command.

---

## Notational Conventions

"CAPITAL LETTERS" (Helvetica typeface) indicates user input. Use upper or lower case letters when entering names and commands.

"CAPITAL LETTERS" (Times typeface) are used for file names.

"ESC" (Helvetica narrow typeface) indicates key entries, for example, Ctrl.

"h" following a number indicates hexadecimal notation, for example, 02AFh.

"[ ]" (square brackets) indicate an optional entry.

"< >" (angle brackets) indicate text to be substituted.

"Courier typeface" indicates screen display.

"□" indicates the end of a chapter.



## 2. Installation Overview

### Installing the Olicom Ethernet 10/100 Adapter

- ❶ Install the adapter in the computer. Chapter 3, *Hardware Installation*, explains this in detail.
- ❷ The system automatically assigns configuration parameters. The MCA parameters are determined by the machine-dependent setup program, and the ISA parameters by the on-board factory default settings. When the ISA Adapter is installed in a Plug and Play machine, the machine automatically sets the parameters to appropriate values.

Function	Default Setting
Interrupt level	Assigned by system - IRQ5 (ISA), IRQ2 (MCA)
I/O Address	Assigned by system - 300h (ISA), 200h (MCA)
RPL	Assigned by system - RPL disabled
Speed	Auto-negotiated by the network
Duplex	Auto-negotiated by the network

**Table 1. Factory Default Settings**

- ❸ Finally, install the adapter driver(s). Most Network Operating Systems (NOSs) provide installation support for Olicom adapters. However, if no procedures are available or manual driver installation is required, use chapter 6, *Software Installation* as a guideline and/or Olicom's on-line documentation.

Installation of the Olicom Ethernet 10/100 Adapter is now completed.

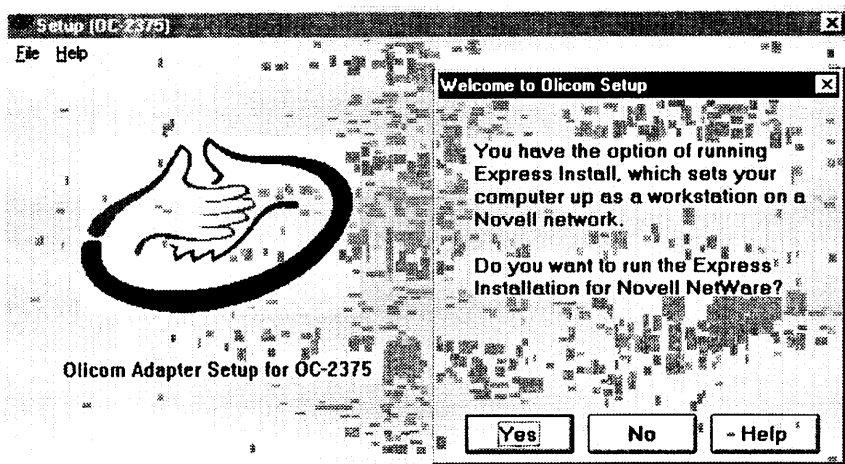
### Express Installation

Express Installation is for people who want to configure their PC as a Novell NetWare DOS/Windows Client workstation. It installs the necessary drivers and programs to attach your PC to a Novell NetWare network.

Required are Olicom Disk 1 (Setup Disk) and Olicom Disk 2 (NetWare Client Disk).

1. Insert the Ethernet 10/100 Adapter in the computer as described in chapter 3.

2. Insert Disk 1 in drive "A:" and enter  
A:SETUP
3. You are asked if you want to proceed with an Express Installation as shown in figure 3 (here for OC-2375 ISA 10/100 Adapter). Select the "Yes" button to proceed with the Express Installation. (Use the mouse or press Enter).



**Figure 3. Do you want to proceed ?**

4. The Novell software licence is now displayed.  
The software needed to connect to a Novell NetWare server has been licensed from Novell by Olicom. Before installing, read the license. If the terms are acceptable to you, click the "Yes" button to accept the license terms. If the terms are unacceptable, return the product for a full refund.
5. You are now prompted for a directory for the Novell files. If you plan to access a Novell server from inside MS-Windows, install the Windows support files. Also make sure that your MS-Windows directory is correctly specified.
6. The files will now be copied from the distribution diskettes and onto your system hard disk. Insert the appropriate disks when prompted to do so.
7. When all files have been copied to the hard disk, some changes are made to your CONFIG.SYS and AUTOEXEC.BAT, as well as to your SYSTEM.INI and WIN.INI files if you are installing the Windows support. You are also asked whether or not you want to automatically login to the NetWare server each time you reboot the PC; answering "Yes" will add the necessary commands to perform a login on each reboot, whereas answering "No" will only load the necessary drivers to access the NetWare server.

8. A Utility Installation Dialog box is now displayed. You can install the Installation Program on the hard disk.
  9. Re-boot the PC to complete the installation.
- The Ethernet 10/100 Adapter is now installed and operational.

---

## System Requirements

The system requirements for the Ethernet 10/100 Adapter installation are:

- A free ISA (AT) or EISA expansion slot for the OC-2375 ISA adapter *or* a free MCA expansion slot for the OC-2335 MCA adapter.
- MS-DOS v. 3.3 or higher – for Novell NetWare DOS workstation environments  
 OS/2 v. 1.x or higher – for Novell NetWare OS/2 Requester environments  
 NetWare 3.1x or higher – for Novell NetWare 386 Server environments  
 MS-DOS v. 3.3 or higher – for IBM PC LAN Program environments  
 MS-DOS v. 3.2 or higher – for Microsoft DOS LAN Manager environments  
 MS-OS/2 v. 1.0 or higher – for Microsoft OS/2 LAN Manager environments  
 IBM-OS/2 v. 2.0 or higher – for IBM LAN Server/Extended Services  
 MS Windows 95 - for Microsoft Windows 95 environments  
 MS Windows NT - for Microsoft Windows NT environments
- A free I/O address range, memory address range and interrupt level as described in Appendix C.
- Free memory capacity to load the Ethernet 10/100 Adapter driver, the network operating system and the required applications



## 3. Hardware Installation

This section describes how to install the Ethernet 10/100 Adapter in one of the expansion slots in your computer. See the computer documentation for additional information on installing expansion cards. The term “computer” is used as a general term to include PC’s, computers and computer systems.

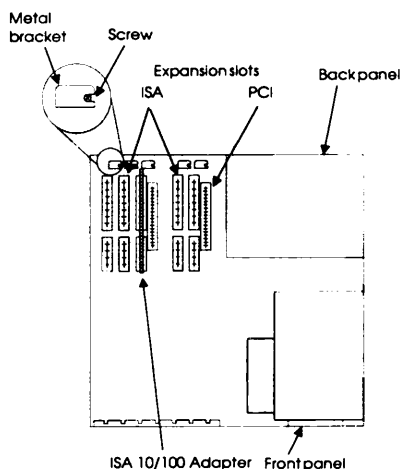
- ➔ **Important:** Static electricity can be destructive to sensitive components on the adapter. Discharge yourself by touching a metal part of a grounded unit (for example, a photocopier or printer) before removing the adapter from the anti-static packing bag.

## Installation Requirements

- A medium-sized screwdriver
- The Operations Guide for your computer.

## Adapter Installation - ISA 10/100 Adapter

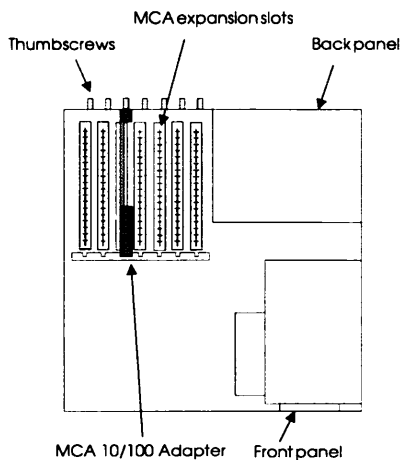
1. Switch all computer system components **OFF** and disconnect all mains power supply cables.
2. Place the peripheral units: keyboard, monitor, etc. away from the PC, and position the PC itself to give yourself easy access to the back panel.
3. Remove the PC top cover to expose the inside of the PC. See figure 4.
4. Choose one of the free ISA (AT) or EISA expansion slots.
5. Remove the screw from the top of the panel which holds the metal bracket on the back panel corresponding to the chosen slot.
6. Tilt the adapter to let the interface connector slip through the opening in the back panel, and then press the edge connector firmly into the chosen expansion slot.
7. Secure the card with the screw from the previously removed metal bracket and re-install the PC top cover.



**Figure 4. PC Top View**

## Adapter Installation - MCA 10/100 Adapter

1. Switch all computer system components **OFF** and disconnect all mains power supply cables.
2. Place the peripheral units: keyboard, monitor, etc. away from the PC, and position the PC itself to give yourself easy access to the back panel.
3. Remove the PC top cover to expose the inside of the PC. See figure 6 for Micro Channel Architecture (MCA-type) computers.
4. The MCA 10/100 Adapter fits a 16- or 32-bit MCA slot.
5. Loosen the thumbscrew that holds the metal plate on the back panel corresponding to the chosen slot.
6. If your computer has an additional plastic cover on the back panel, pry it out carefully with a screwdriver.
7. Tilt the adapter to let the interface connector slip through the opening in the back panel, and then press the edge connector firmly into the chosen expansion slot. (Make sure that the end of an MCA Adapter fits into the card guide at the front panel).
8. Secure the card with the thumbscrew from the previously-removed metal bracket and replace the PC top cover.



**Figure 5. MCA PC Top View**

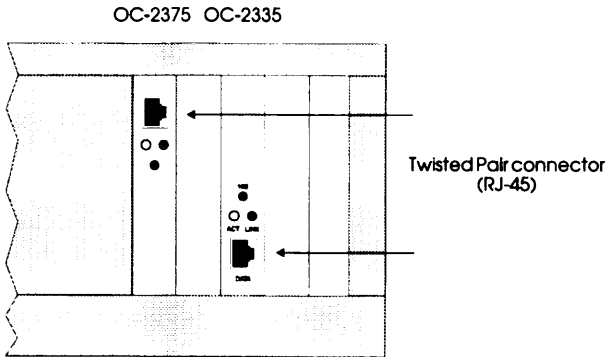
## Connecting the Adapter Cable

1. *Twisted pair connector (RJ-45)*

Insert the modular telephone jack in the RJ-45 connector. The jack is secured and correctly inserted when you hear a click.

For 10 Mbps operation, a category 3, 4 or 5 cable is required.

For 100 Mbps operation, a category 5 cable is required.



**Figure 6. Back Panel**

2. Connect the other end of the cable to a wall outlet or a transceiver.
3. Make sure that the PC is turned **OFF** then re-connect the main power supply cable.
4. Switch power **ON**.





## 4. Adapter Configuration

### Ethernet ISA 10/100 Adapter

The ISA 10/100 Adapter is factory configured to:

I/O address location: 300h

Interrupt level: IRQ5

RPL: RPL disabled

If you want to change the default configuration, use the Olicom *Adapter Setup* program's "Hardware Configuration" utility. See the on-line help file for details.

- ➡ **Note:** If the ISA 10/100 Adapter is installed in a Plug and Play-compliant machine, the machine automatically assigns non-conflicting parameter values (that might well differ from the default values).

### Ethernet MCA 10/100 Adapter

1. Turn power OFF and insert in drive "A:" the backup copy of the REFERENCE/USER diskette that came with your computer.  
If you have not yet made a backup copy of the REFERENCE/USER diskette, do so by selecting the "BACKUP THE REFERENCE DISKETTE/COPY USER DISKETTE" function from the MAIN MENU on the original diskette.
2. Turn power ON to start the PC from the diskette, and wait for the MAIN MENU to appear.

- ➡ **Note:** Do not at this stage choose to run an automatic configuration as you are prompted to do!

3. Select the "COPY OPTION DISKETTE" function, and follow the instructions.
4. When prompted for an option diskette, insert the Driver diskette that came with the MCA 10/100 Adapter.  
When the adapter description file has been copied onto you REFERENCE/USER diskette, you are returned to the MAIN MENU.
5. Select the "SET CONFIGURATION" function to invoke the configuration menu.
6. Select "RUN AUTOMATIC CONFIGURATION". The preferred settings are:  
I/O address location: 200h  
Interrupt level: IRQ2  
RPL: RPL disabled  
Select the "VIEW CONFIGURATION" function from the SET CONFIGURATION menu if you want to know the exact settings.

- ➡ **Note:** If you are installing to NetWare 3.12, NetWare 4.10, or Windows 95, select the “VIEW CONFIGURATION ” function from the SET CONFIGURATION menu. Make a note of the slot number, as you will need it later.

You may now proceed to chapter 6 to install the adapter driver software.



---

## 5. Diagnostics

The Adapter Diagnostics program is located on Disk 4, the Diagnostics Disk .  
Use the program to:

- Test the adapter and the adapter cable
- View the current adapter configuration

The diagnostics consist of a series of tests that are executed in sequence, and the test results are displayed on the screen.

Execute the adapter diagnostics in the following situation:

- When you suspect a problem

See also chapter 9, *Getting in Touch with Technical Support*, if the Ethernet 10/100 Adapter reports an error.

---

### Running the Diagnostics Program

1. Make sure that the adapter is connected to the network
2. Insert the Diagnostics Disk (Disk 4) in the diskette drive.
3. Boot the system from Disk 4.

Press <Ctrl>, <Alt> and <Del> simultaneously or turn power off and on.

Use the Diagnostics Program's own on-line help for further information about the program.



## 6. Software Installation

### Why Adapter Drivers?

The adapter driver software creates an interface between the adapter and the client software loaded on the workstation which is required to operate in the Network Operating System environment.

All major network operating system environments provide facilities for the installation of adapter driver software and Olicom drivers are often pre-defined in the relevant configuration utilities. If the facility to install Olicom drivers from the Network Operating System is available, Olicom recommends that this approach is taken.

However, if no such procedures are available, or manual installation is preferred, use the following sections as guidelines for the adapter driver installation. Extensive installation procedures are available in the Olicom's on-line documentation on the Setup Disk (Disk 1).

### Supported Environments and Drivers

Environment	Driver	Section
NetWare DOS ODI Workstation	OCE3XODI.COM	6.1.1
NetWare OS/2 Requester	OCE3XODI.SYS	6.1.2
NetWare 3.11 Server	OCE3X311.LAN	6.2.1
NetWare 3.12 Server	OCE3XODI.LAN	6.2.2
NetWare 4.x Server	OCE3XODI.LAN	6.2.3
IBM LAN Support Program	OCE3XND2.DOS	6.3.1
IBM NTS/2 and IBM E.S.	OCE3XND2.OS2	6.4.1
LAPS (IBM LAN Server 3.0)	OCE3XND2.OS2	6.4.2
MPTS (IBM LAN Server 4.0)	OCE3XND2.OS2	6.4.3
Microsoft LAN Manager	OCE3XND2.DOS/OS2	6.5
MS Network Client 3.0	OCE3XND2.DOS	6.8
MS Windows for Workgroups 3.11	OCE3XND2.DOS	6.9.1
	OCE3XODI.COM	6.9.2
MS Windows 95	OCE3XM.SYS	6.10
MS Windows NT	OCE3XM.SYS	6.11

Proceed to the section that covers the local network environment.

---

## 6.1 Novell NetWare Workstations

Olicom provides two drivers for use in Novell NetWare workstations: one for the NetWare OS/2 Requester (OS/2 ODI driver) and one for NetWare DOS Workstations (DOS ODI driver).

If the Novell NetWare version provides installation support for Olicom adapters and drivers, use the native NOS installation utility. Otherwise, proceed with the relevant section in this chapter.

With Novell server operating systems up to version 3.11, Novell shipped the NETX client software. With versions 3.12 and 4.x, Novell ships the VLM client software. While both may be used, the VLM client is required if you want to take advantage of the new functionality in version 3.12 and 4.x servers.

---

### 6.1.1 NetWare DOS ODI Workstation

#### ***VLM installation***

For installation of the NetWare DOS/Windows VLM client, run the NOVELL install program. When the installation requests the driver diskette, insert the Driver Disk supplied with the adapter and select the OCE3XODI driver. The NET.CFG file is generated by the Novell install program.

The VLM (Virtual Loadable Module) client is loaded using the following sequence of commands:

LSL.COM	(Link support module, Novell supplied)
OCE3XODI.COM	(Ethernet ODI driver)
IPXODI.COM	(IPX/SPX Protocol module, Novell supplied)
VLM.EXE	(NetWare Requester, Novell supplied)

If you let the install program modify your CONFIG.SYS and AUTOEXEC.BAT files, these commands are automatically executed during boot.

## NETX installation

This installation procedure requires the following software and documentation:

- Novell NetWare DOS ODI support programs
  - Driver Disk
1. Copy the Novell NetWare DOS ODI support programs to a disk as explained in the Novell documentation.
  2. Copy the OCE3XODI.COM driver to the same disk as the Novell NetWare DOS ODI support programs:

```
COPY A:\DOS\OCE3XODI.COM C:\<path>
```

3. Insert the following line in the file AUTOEXEC.BAT:

```
OCE3XODI
```

OCE3XODI must be loaded after LSL, but before any protocol stacks (for example, IPXODI).

*Sample AUTOEXEC.BAT:*

```
LSL                (Link support module, Novell supplied)
OCE3XODI           (Ethernet ODI driver)
IPXODI             (IPX/SPX Protocol module, Novell supplied)
NETX              (NetWare Requester, Novell supplied)
```

Other protocol stacks and requesters are possible. See Novell NetWare documentation.

4. Edit the NET.CFG file, if desired, to configure the workstation. See the Novell documentation provided with the ODI Shell for general information about the NET.CFG file.

*Sample NET.CFG:*

```
# Start of NET.CFG
# Two adapters, with both SNAP and 802.2 support
# and with locally assigned node addresses:
```

```
Link driver OCE3XODI
Port 300
Speed Auto
Duplex Half
Node address 060011110002
Frame Ethernet_802.2
Frame Ethernet_SNAP
```

```
Link driver OCE3XODI
Port 340
Node address 020011110001
Frame Ethernet_802.2
Frame Ethernet_SNAP
```

```
# End of NET.CFG
```

The line “Link Driver .....” must begin in the first column and the parameters that follow must be indented.

The following parameters may be set with the OCE3XODI driver:

### **Port**

Use this parameter to identify the adapter. This parameter is required if more than one adapter is used. If no PORT parameter is entered, the driver will use the first found adapter.

### **Speed**

SPEED (AUTO, 10, 100), AUTO is default.

This parameter can be used to force the adapter to use a specified network data rate of either 10 Mbps or 100 Mbps. If AUTO is selected (or if the parameter is omitted), the adapter will auto-negotiate the speed.

### **Duplex**

DUPLEX (AUTO, FULL, HALF), AUTO is default.

This parameter can be used to force the adapter to use a specified DUPLEX mode. If AUTO is selected (or the parameter is omitted), the adapter will auto-negotiate the duplex mode. In some HUBS and SWITCHES, the auto-negotiation of duplex operation is unresolved; in these cases half duplex operation will be used. Use DUPLEX FULL to force full duplex operation.

### **Node Address**

Enter this parameter to enable manual administration of node addresses. The default value is the globally-assigned (burned-in) address. If an address is entered, the 11th digit from the right must be 2, 6, A or E as in 02123456789A.

### **Frame**

The media frame type parameter determines the Ethernet packet header(s) that the driver will support. Supported values for this parameter are:

Ethernet\_802.2  
 Ethernet\_802.3  
 Ethernet\_II  
 Ethernet\_SNAP

If Frame is omitted, the default value is Ethernet\_802.2, which is the default frame type for ODI drivers. Existing LANs may be using Ethernet\_802.3. More than one frame type may be enabled by repeating the parameter on separate lines.

## 6.1.2 NetWare OS/2 Requester

This installation procedure requires the following software and related documentation:

- Novell NetWare Requester for OS/2 v. 1.1 or higher
  - Driver Disk
  - OS/2 v. 1.1 or higher
1. Install the NetWare Requester for OS/2 on the OS/2 workstation. See the "*NOVELL NetWare Requester for OS/2 Supplement*" manual. Some versions of the OS/2 Requester Installation Program require that one of the Novell supplied drivers is loaded. If so, simply choose one at random, and then replace it with the Olicom driver in step 3.
  2. Copy the OCE3XODI.SYS driver to the OS/2 workstation directory that contains the NetWare device drivers:

```
COPY A:\OS2\OCE3XODI.SYS C:\<path>
```

(<path> was chosen during NetWare Requester installation)

3. Insert the following line in CONFIG.SYS to load OCE3XODI.SYS:
- ```
DEVICE=C:\<path>\OCE3XODI.SYS
```

The line must be inserted where the network adapter driver statements, supplied with the OS/2 Requester, are disabled by "rem"s.

### Supplementary information about the NET.CFG file:

In the OS/2 environment the NetWare modules are configured via the NET.CFG text file. The following information describes the valid configuration options for the OCE3XODI.SYS driver.

#### *Sample NET.CFG:*

```
Link Support
    Buffers 10 1514
Link Driver OCE3XODI
    Frame Ethernet_802.2
```

- ➡ **Note:** The line heading the driver section (Link Driver OCE3XODI) must not contain leading spaces, whereas the options must be indented one or more spaces.

See the previous section, NetWare DOS ODI Workstation for information on parameters to use with the OCE3XODI driver.



---

## 6.2 Novell NetWare Servers

The Ethernet Adapters may be installed in NetWare 3.1x and 4.x servers. Error messages for NetWare are listed in Appendix B.

---

### 6.2.1 NetWare 3.11 Servers

1. If using standard NetWare 3.11 (not SFT III), make sure the MONITOR.NLM file is version 1.75 (or later). This version of the NLM is on the Driver Disk (in \NETWARE\NW311). Using an earlier version can cause server failure (ABENDs) when viewing statistics in monitor.
2. Insert the Driver Disk in drive A and load the following NLMs:

```
LOAD A:\NETWARE\NW311\PATCHMAN.NLM
LOAD A:\NETWARE\NW311\LSLENH.NLM
LOAD A:\NETWARE\NW311\MSM31X.NLM
LOAD A:\NETWARE\NW311\ETHERTSM.NLM
```

If the modules are already loaded, make sure that MSM31X.NLM is version 2.50 or higher and that ETHERTSM.NLM is version 2.50 or higher, as this is required by the driver.

3. With the Driver Disk in drive A load the adapter driver:  

```
LOAD A:\NETWARE\NW311\OCE3X311.LAN
```
4. With the server now accessible, copy the OCE3X311.LAN server driver and the NLMs you have just loaded from the Driver Disk in a NetWare workstation to the SYSTEM directory of the connected server.
5. Ensure automatic loading of the 386 server driver at re-boot by inserting the following commands in the server's AUTOEXEC.NCF file:

```
LOAD PATCHMAN
LOAD LSLENH
LOAD MSM31X
LOAD ETHERTSM
LOAD OCE3X311
BIND IPX OCE3X311
```

---

### 6.2.2 NetWare 3.12 Servers

1. Insert the Driver Disk in drive A and load the following NLMs:

```
LOAD A:\NETWARE\NW312\NBI31X.NLM
LOAD A:\NETWARE\NW312\MSM31X.NLM
LOAD A:\NETWARE\NW312\ETHERTSM.NLM
```

If the modules are already loaded, make sure that NBI31X.NLM is version 1.30 or higher, MSM31X.NLM is version 3.03 or higher, and that ETHERTSM.NLM is version 3.01 or higher, as this is required by the driver.

2. With the Driver Disk in drive A load the adapter driver:

LOAD A:\NETWARE\NW312\OCE3XODI.LAN

3. With the server now accessible, copy the OCE3XODI.LAN server driver and the NLMs you have just loaded from the Driver Disk in a NetWare workstation to the SYSTEM directory of the connected server.
4. Ensure automatic loading of the 386 server driver at re-boot by inserting the following commands in the server's AUTOEXEC.NCF file:

LOAD NBI31X  
LOAD MSM31X  
LOAD ETHERTSM  
LOAD OCE3XODI  
BIND IPX OCE3XODI

---

### 6.2.3 NetWare 4.x Servers

1. If the NetWare 4.x server operating system has not been installed already, install it now. As part of the installation process, the INSTALL utility prompts for a LAN driver. Proceed to step 3.
2. If the server is operating, load the INSTALL.NLM utility at the server console.
3. If you are using NetWare 4.0x, select "Maintenance/Selective Install" and then "LAN Driver Options".  
If you are using NetWare 4.10, select "Driver Options" and then "Configure Network Drivers".
4. Insert the Driver Disk and press "Insert" to import the driver, then choose the driver from the list.  
The Ethernet ISA Adapter requires a SLOT parameter. If a SLOT parameter is not supplied to the INSTALL utility, you must switch to the console screen where the driver presents a list of available I/O addresses and waits for user input.

**➡ Note:** If your system does not support Plug and Play, you will be prompted for a PORT parameter.

---

## 6.3 IBM DOS Environment

---

### 6.3.1 IBM LAN Support Program (DOS) - NDIS 2.0 Driver

This section describes the procedure for installing the Olicom NDIS 2.0 MAC Driver in the IBM LAN Support Program for DOS with the IBM Installation Aid.

1. Follow the guidelines described by IBM for "*Installing the LAN Support Program*" with the "*Installation Aid*" program.

2. Run the Installation Aid program:

DXMAID

3. When prompted for changes in the "Setup" window, select "YES" in the field labelled "Do you have Driver Diskettes?".
4. When the "Process Driver Diskette" window appears, insert the Driver Disk in drive A: and type:

A:\IBM\NDIS.DOS

5. Select "Olicom Ethernet ISA/MCA 10/100 Adapter" in the "ADAPTER DRIVER" window.
6. Press F5 to change or view the NDIS driver parameters.  
For more information about parameters which may be used for configuring the network adapter, see Olicom's on-line documentation for detailed information.
7. Follow the IBM guidelines to complete the installation.

The MAC driver for the adapter is now installed in the LAN Support Program configuration. To install the IBM DOS LAN Requester, follow the guidelines given by IBM.

## 6.4 IBM OS/2 Environment

IBM Extended Services 1.0 and IBM LAN Server use the NDIS interface. The NDIS 2.0 drivers for DOS and OS/2 are also referred to as MAC drivers.

### 6.4.1 IBM NTS/2 and IBM Extended Services

This section describes how to install the MAC driver for the adapter with IBM NTS/2 and IBM Extended Services.

1. Start the Communication Manager and select "Advanced", "Configuration", "LAN Adapter and Protocol Support" and "Copy additional network adapter drivers".
2. When requested to do so, insert the Driver Disk and enter the path to the driver:

A:\IBM\NDIS.OS2

3. When the network driver has been copied, select "Configure workstation" and configure the workstation (refer the IBM documentation).  
See also "*Configuring the NDIS 2.0 MAC Driver*" in the Olicom on-line documentation.
4. When you have completed the installation, the following files have been copied to the \IBMCOMM\ACS directory:  
OCE3XND2.OS2 (driver)  
OCE30.NIF (network interface file)

### 6.4.2 LAPS (LAN Server 3.0)

This section describes how to install the MAC driver for the Olicom Ethernet Adapter with LAN Server 3.0:

- while installing LAN Adapter and Protocol Support (LAPS)
- after installing LAN Adapter and Protocol Support (LAPS)

#### ***Install the MAC Driver while installing LAPS***

1. Insert the "*IBM Network Transport Services/2, LAN Adapter and Protocol Support*" diskette in drive "A" and run the LAPS-program (i.e. A:\LAPS).
2. Select "Install" in the LAN Adapter and Protocol Support program's main menu. The program installs LAPS on the hard disk.
3. At a certain stage during installation the "Protocol Support programs main menu" reappears, but this time with the "Install", "Configure", "Remove", "Exit" and "Help" options selectable.  
Proceed with the installation as described in "Install the MAC Driver after LAPS", step 2.

### ***Install the MAC Driver after installing LAPS***

1. Make \IBMCOM the current directory and run the LAPS program by typing:  

```
CD \IBMCOM
LAPS
```
2. Select the "Install" option in the LAPS main menu.
3. When prompted for the source path of "Additional Network Drivers", insert the Driver Disk in drive "A", enter the path "A:\IBMNDIS.OS2" and select "OK".
4. When the message "Installation Complete" appears on screen, select "OK". Configuration of the Ethernet adapter can now take place.
5. Select "Configure", "Configure LAN Transport" and "Continue".
6. Select "Olicom Ethernet ISA/MCA 10/100 Adapter" as the network adapter by adding it to "Current Configuration". The parameters of the Olicom adapter may now be edited.
7. Select "Olicom Ethernet ISA/MCA 10/100 Adapter" in the current configuration list and then "Edit".
8. Add and configure protocols to suit the requirements.
9. Select "OK" when the configuration of the LAN Transports is complete.
10. Select "Exit" in the LAPS main menu and let LAPS update CONFIG.SYS on the boot drive by selecting "Continue".
11. Follow instructions given by LAPS to complete the installation.

---

### **6.4.3 MPTS (LAN Server 4.0 and OS/2 Warp Connect)**

This section describes how to install the MAC driver for the Olicom Ethernet Adapter with LAN Server 4.0 and OS/2 Warp Connect:

- **while installing** Multi-Protocol Transport Services (MPTS)
- **after installing** Multi-Protocol Transport Services (MPTS)

#### ***Install the MAC Driver while installing MPTS***

1. Install MPTS as described by IBM.
2. At a certain stage during installation, the MPTS main menu will appear again, but with the "Install", "Configure", "Remove", "Exit" and "Help" options selectable.
3. Proceed with the installation as described in step 2 under "Install the MAC driver after installing MPTS".

## ***Install the MAC Driver after installing MPTS***

1. Make \IBMCOM the current directory and run the MPTS program by typing:  

```
CD \IBMCOM
MPTS
```
2. Select the "Configure" option in the MPTS main menu.
3. Select "LAN Adapters and Protocols" and then "Configure".

You are now in the "MPTS Configuration" and have two options:

- a) Update the driver with the drivers from your Driver Disk
- b) Use a previously installed Olicom Ethernet ISA/MCA Adapter.

### ***Updating the driver with your Driver Disk:***

4. Push the "Other Adapters..." button.
5. Insert the driver diskette in drive A and enter the path "A:\IBM\NDIS.OS2". Press OK.

### ***Using a previously installed adapter:***

6. Select "Olicom Ethernet ISA/MCA Adapter" as your network adapter card by adding it to the "Current Configuration"
7. To edit the adapter parameters, select "Olicom Ethernet ISA/MCA Adapter" in the current configuration list and then selecting "Edit".
8. Add and configure protocols to suit your requirements.
9. Select "OK" and "Close" when configuration of the LAPS is complete.
10. Select "Exit" in the MPTS main menu and let MPTS update your CONFIG.SYS by selecting "Continue".
11. Follow the instructions given by MPTS to complete the installation. The adapter will become active when the system is rebooted.

## 6.5 Microsoft LAN Manager 2.x - DOS and OS/2

---

The installation procedure is identical for DOS and OS/2. One may choose to install the MAC driver during LAN Manager installation, or to install the LAN Manager first and then modify the installation by installing the MAC driver.

- ➔ **Note:** All LAN Manager 2.x versions are covered by these procedures *except* LAN Manager 2.0. See Olicom's on-line documentation for LAN Manager 2.0 installation.

During installation of the MAC driver it may be convenient to have the following documentation at hand:

- MS-DOS or OS/2 User's Guide
- Microsoft LAN Manager 2.x Installation Guide
- Microsoft LAN Manager 2.x Network Device Drivers Guide

### 6.5.1 Installing During LAN Manager Installation

---

1. Start installation of the LAN Manager and follow the instructions.
2. When the LAN Manager Setup program has read the standard driver diskettes, additional diskettes are prompted for. Select "YES", insert the Driver Disk when requested and press Enter.
3. Select "Olicom Ethernet ISA/MCA 10/100 Adapter" from the menu that appears and press Enter.
4. The MAC driver is then installed and can be selected from the driver menu during the subsequent hardware selection phase.

### 6.5.2 Installing After LAN Manager Installation

---

1. Install the LAN Manager and re-activate the Setup program from the LAN Manager directory (e.g. LANMAN).
2. Select "Configuration" from the system menu and "Network drivers", "Add New Config" and "Other Driver" from the pull-down menus.
3. Insert the Driver Disk when prompted to insert the network driver diskette, then press Enter.
4. Select "Olicom Ethernet ISA/MCA 10/100 Adapters" from the menu that appears and press Enter.  
Follow the guidelines in the MS LAN Manager manuals to complete the installation.
5. Select the "SAVE" function to update the CONFIG.SYS file with the new driver.

---

## 6.6 Configuring the NDIS 2.0 MAC Driver

Configuration of the NDIS 2.0 MAC driver is described in detail in Olicom's on-line documentation, "*Configuring the NDIS 2.0 MAC Driver*".

---

## 6.7 NDIS 2.0 MAC Driver Messages

When you boot your system, a number of messages are displayed on the screen. Some messages are for information only and some are information about errors.

During driver load one of the following texts is displayed:

```
DOS NDIS 2.02: MAC Driver for Ethernet ISA/MCA 10/100 Adapters,  
vx.xx, (yyymmdd)  
Copyright 1996 Olicom A/S. All Rights Reserved.  
OC-23xx MAC driver installed. Using I/O address xxxxx-xxxxx, IRQ yy.  
100 Mbps, Half duplex operation detected.
```

or

```
OS/2 NDIS 2.02: MAC Driver for Ethernet ISA/MCA 10/100 Adapters,  
vx.xx, (yyymmdd)  
Copyright 1996 Olicom A/S. All Rights Reserved.  
OC-23xx MAC driver installed. Using I/O address xxxxx-xxxxx, IRQ yy  
100 Mbps, Half duplex operation detected.
```

The speed and duplex operation displayed will vary depending on the detected mode and/or settings from PROTOCOL.INI.

If messages other than the ones above are displayed, a failure is indicated. See the error message listings in Appendix B.



---

## 6.8 Microsoft Network Client 3.0 for DOS

This section describes how to install the NDIS 2.0 MAC driver with Microsoft Network Client v. 3.0 for MS-DOS.

1. Run the Microsoft Network Client "SETUP" program either from the installation disk or from the \NET directory on your hard disk.
2. When you are prompted to select a network adapter, choose "Network adapter not shown on list below..." if your Olicom adapter is not contained in the list.
3. Insert the Olicom Driver Disk (and change the path to A:\ if necessary).
4. Press <Enter> and select the Olicom adapter.
5. Follow the instructions from the Microsoft Network Client SETUP program to complete the installation.

For additional information about adapter configuration parameters, see "*Configuring the NDIS 2.0 MAC Driver*" in the Olicom on-line documentation.

## 6.9 Microsoft Windows for Workgroups 3.11

With Windows for Workgroups 3.11 select one of the following configurations:

- NDIS 2.0 driver
- ODI driver

If access to a Novell server is required, see “*Microsoft WfW 3.11 ODI Installation*” in Olicom’s on-line documentation.

---

### 6.9.1 NDIS 2.0 Driver

The installation is done by adding the drivers from the Driver Disk - Disk 3.

1. Select the “Network Setup” icon from the “Network” window.
2. In the “Network Setup” panel click the “Networks...” button.
3. Select “Install Microsoft Windows Network” and make sure the “No additional network” radio button is selected.
4. Click the “OK” button or press <Enter>.
5. Click the “Drivers...” button.
6. If you are replacing a previous LAN adapter, select the “Remove” button to delete that adapter.
7. In the “Network Drivers” panel click the “Add Adapter...” button.
8. Highlight the “Unlisted or Updated Network Adapter” choice and click the “OK” button.
9. The setup program prompts for a vendor-provided network driver disk. Insert Disk 3 in drive A. Change the path specified to “A:\” and click “OK”. If the Driver Disk is located in another directory or drive, enter the correct path or use the “Browse” function.
10. In the “Unlisted or Updated Network Adapter” panel, select “Olicom Ethernet ISA/MCA 10/100 Adapter” and click “OK”.
11. If you need to change any driver parameters, highlight the “Olicom Ethernet ISA/MCA 10/100 Adapter” and click the “Setup...” button in the “Network Drivers” panel.
12. If you want to change any of the parameters for the NDIS driver, click the “Advanced...” button.
  - a) Highlight the parameter you wish to change and enter a value in the box below the parameters or select the “Not present” button if the parameter should be omitted from PROTOCOL.INI.
  - b) Click the “Set” button when the parameter is correct.
  - c) Click the “OK” button when all parameters have been set correctly.
13. Add additional network drivers and/or protocols in the “Network Drivers” panel.

14. Click the "Close" button when done.
15. To share files and/or printers, change the settings in the "Sharing" panel by clicking the "Sharing..." button. Click "OK" to return from the "Sharing" panel.
16. Click the "OK" button when done.
17. If the network is being installed for the first time, enter a user name, workgroup name and a computer name. Make sure the computer name is unique throughout the network. Click "OK" when done.
18. Setup may require some additional files from the Windows for Workgroups 3.11 distribution disks. Insert these when prompted.
19. Windows for Workgroups 3.11 automatically changes the CONFIG.SYS, AUTOEXEC.BAT, SYSTEM.INI and PROTOCOL.INI files if necessary. Click "OK" to confirm these changes.
20. Select "Restart Computer" to make the changes take effect. Remember to save any unsaved information before restarting the system.

### **Adapter Parameters**

To view or change the adapter parameter settings for the Olicom driver, do the following:

1. Select the "Network Setup" icon from the Network Window.
2. Select the "Drivers..." button.
3. Highlight the adapter you wish to review.
4. Click the "Setup..." button.
5. Click the "Advanced..." button.
6. Highlight the adapter parameter you wish to review. The value is displayed in the box below the "Advanced Network Adapter Settings" box.
7. To change a setting, enter the new value in the "Value" field for the proper parameter.
8. Click the "Set" button to accept the setting.
9. When all parameters have been set correctly, click the "OK" button. Click the "OK" button in the "Olicom Ethernet ISA/MCA 10/100 Adapter" panel to return to the "Network Drivers" panel.
10. Click "Close" to exit the drivers panel.
11. Selecting "OK" in the "Network Setup" panel will create a new set of network files, that is, PROTOCOL.INI, SYSTEM.INI etc. Click "OK". The changes will take effect when you re-start the computer.

## Multiple Adapter Configuration (WfW 3.11)

If installing more than one Ethernet Adapter in the same computer, the network driver must be installed once for each network adapter.

---

### 6.9.2 ODI Driver

To install an ODI driver you must:

- Remove any existing network from the Windows for Workgroups 3.11 configuration.
- Install the DOS ODI driver
- Add NetWare support in Windows for Workgroups 3.11.

#### Removing existing network

From within Windows for Workgroups 3.11:

1. Select the "Network Setup" icon in the "Network" window.
2. Click the "Networks..." button in the "Network Setup" panel.
3. Click the "No Windows support for networks" button.
4. Click the "OK" button.
5. Click the "OK" button in the "Network Setup" panel.
6. Confirm changes made to AUTOEXEC.BAT, SYSTEM.INI and PROTOCOL.INI, by clicking the "OK" button.
7. Re-start the computer.

#### Installing the DOS ODI Driver

1. From within DOS install the OCE3XODI DOS ODI driver as described in the "NetWare DOS Client" section.
2. Re-start the computer.
3. Make sure you can log in to the Novell server.
4. Start Windows for Workgroups 3.11

#### Adding NetWare Support in Windows for Workgroups 3.11

From within Windows for Workgroups 3.11 do the following:

1. Select the "Network Setup" icon from the Network Window.
2. In the "Network Setup" panel click the "Networks..." button.
3. Select "Install Microsoft Windows Network".
4. Select the "Other" button.

5. Highlight "Novell NetWare (Workstation Shell 3.x)" or "Novell NetWare (Workstation Shell 4.0 or above)" depending on the NetWare version.
6. Click the "OK" button.
7. If the "Novell NetWare" panel is displayed, select "IPXODI.COM and LSL.COM (recommended)".
8. Click the "OK" button.
9. Click the "Drivers..." button.
10. In the "Network Drivers" panel click the "Add Adapter..." button.
11. Highlight the "Unlisted or Updated Network Adapter" choice and click the "OK" button.
12. The setup program prompts you for a vendor-provided network driver disk. Insert the Driver Disk. Change the path specified to "A:\\" and click "OK". If the Driver Disk is located in another directory or drive, enter the correct path or use the "Browse" function.
13. In the "Unlisted or Updated Network Adapter" panel, select the "Olicom Ethernet ISA/MCA 10/100 Adapter" and click "OK".
14. In the "Network Drivers" panel click the "Close" button.
15. To share files and/or printers, change the settings in the "Sharing" panel by clicking the "Sharing..." button. Click "OK" to return from the "Sharing" panel.
16. Click the "OK" button when done.
17. If the network is being installed for the first time, enter a user name, workgroup name and a computer name. Make sure the computer name is unique throughout the network. Click "OK" when done.
18. Setup may require some additional files from the Windows for Workgroups 3.11 distribution disks. Insert these when prompted.
19. Windows for Workgroups 3.11 automatically changes the CONFIG.SYS, AUTOEXEC.BAT, WIN.INI, SYSTEM.INI and PROTOCOL.INI if necessary. Click "OK" to confirm these changes.
20. Remove the Driver Disk from drive A:.
21. Select "Restart Computer" to make the changes take effect. Remember to save any unsaved information before restarting the system.

---

## 6.10 Microsoft Windows 95

1. Install the Olicom Ethernet 10/100 Adapter in a free expansion slot (see Installing the Network Adapter).
2. When starting Windows 95 the next time, a "New Hardware Found" window will appear notifying that Windows 95 has found a new Ethernet adapter. The network driver for the Ethernet 10/100 Adapter is not included in all Windows 95 packages. This gives two possibilities:
  - 3a. If the network driver is included in the Windows 95 package you have, Windows 95 will automatically install the network driver.  
Restart Windows 95 for the changes to take effect.  
If you want to do this proceed to the driver update section below.
  - 3b. If the network driver is not included in the Windows 95 package, select "Driver from disk provided by hardware manufacturer" and press "OK". Insert the Olicom Driver Disk and press "OK". If the Driver Disk is located in another directory or drive, enter the correct path.  
Follow the Windows 95 guidelines to complete the installation.  
Restart Windows 95 for the changes to take effect.

---

### 6.10.1 Driver update

If the Ethernet 10/100 driver is included in the Windows 95 package, and you want to use the latest enhancements of the Olicom driver, update the network driver with the one on the Olicom Driver Disk.

This can be done by using the Olicom Install Program or by using the Windows 95 update procedure.

#### Update Driver using the Olicom Install Program

1. Run the Olicom Setup Program from Disk 1.
2. Click the Windows 95 driver upgrade button, and insert the Driver Disk (Disk 3) when requested.
3. Restart Windows 95 for the changes to take effect.

#### Update Driver using Windows 95

1. From the "Start" menu select "Settings", "Control Panel", "Add/Remove Programs".
2. Select the "Windows Setup" tab and click the "Have Disk" button.
3. Insert the Driver Disk (Disk 3) into drive A and press "OK".
4. In the "Components" window select the "Update Miniport Driver" and press the "Install" button.

5. Press the "OK" button.
6. Restart Windows 95 for the changes to take effect.

---

## 6.10.2 Multiple Adapter Configuration - Windows 95

If installing more than one Ethernet Adapter in the same computer, the network driver must be installed once for each network adapter. The first driver will load on the first adapter, the second driver on the second adapter, and so forth.

---

## 6.10.3 Adapter Parameters

To configure the network adapter, open "Network" in the "Control Panel", select the "Olicom Ethernet ISA/MCA 10/100 Adapter" and click the "Properties" button. Click the "Advanced" tab to set the adapter parameters. The default parameters will work correctly for most configurations. Use defaults if you do not know what the parameters do.

### **Speed (Auto, 10, 100)**

This parameter can be used to force the adapter to use a specified data rate of either 10 Mbps or 100 Mbps.

### **Duplex (Auto, Half, Full)**

This parameter can be used to force the adapter to use a specific duplex setting.

### **Network Address**

Use the Network address field if you do not want to use the adapter's burned-in Ethernet address. The value entered must be a locally administered address with the format "X\*XXXXXXXXXX", where "X" is any hexadecimal digit and "\*" is 2, 6, A, or E.

If the NDIS 3 driver encounters an invalid network address, the invalid network address error message is posted.

---

## 6.11 Microsoft Windows NT

The installation procedure for Microsoft Windows NT workstation and server operating systems are the same. Both operating systems will hereafter be referred to as "Windows NT".

During installation of the NDIS 3.0 Miniport driver, have the Windows NT System Guide at hand. Review the "Configuring the Network" section prior to installation.

The NDIS 3.0 Miniport installation procedure described below will copy all necessary set-up files to the Windows NT "System32" directory and the driver to the "System32\Drivers" directory. In addition, several changes will be made to the registry. Do not try to manually change entries in the registry. All driver parameters can be set from the Network control panel.

---

### 6.11.1 Installation Procedure

The installation procedure for the NDIS 3.0 Miniport driver allows installation either during or after the initial Windows NT installation. If Windows NT is already installed, see the "Adding adapter" section below.

---

### 6.11.2 MAC Installation During Windows NT Installation

1. Follow the instructions in the Windows NT System Guide to begin Windows NT installation.
2. If you have selected custom set-up, select "Do Not Detect" when the "Network Adapter Card Detection" window displays, as there is no netcard detection module included with the Olicom MAC drivers.
3. When the message "Set-up did not detect a network card" displays, select "Continue" to go to the adapter card set-up phase.
4. Continue with step 4 in the "Adding adapter" section below.

---

### 6.11.3 Adding an Adapter

If installing a network adapter after Windows NT has been successfully installed on the system, you must be logged on with administrative rights to be able to add, configure and remove network adapters.

1. Select the Control Panel in the Main window.
2. Select the Network icon.
3. In the Network Settings panel, select the "Add adapter" button.



4. In the list of Network Adapter Cards, select "<Other> Requires disk from manufacturer" and press the "Continue" button.
5. Enter the full path to the setup files.  
When installing from the Driver Disk enter:  
    A:\
6. Confirm choice, by selecting proper adapter type and select the "OK" button.  
The setup program now copies installation files to the hard disk.
7. Select proper values when a dialog box is displayed prompting for parameters.  
See the "Adapter Parameters" section below for further details.
8. Press the "OK" button when all parameters have been set correctly.  
The setup program now copies the NDIS 3.0 Miniport driver to the hard disk.
9. Review the binding settings by selecting the "Bindings" button. Press "OK" to return from the Network Bindings windows.
10. Select the "OK" button in the Network control panel when all adapters have been added.
11. The settings will not take effect, until the system is re-started. If Windows NT is installed on the system, system re-start can be initiated by selecting the "Restart Now" option in the dialog box shown when you exit the Network Control Panel.

---

### 6.11.4 Adapter Parameters

When configuring an adapter, the following parameters can be modified.

#### **Speed (Auto, 10, 100)**

This parameter can be used to force the adapter to use a specified data rate of either 10 Mbps or 100 Mbps.

#### **Duplex (Auto, Half, Full)**

This parameter can be used to force the adapter to use a specific duplex setting.

#### **Network Address**

Use the Network address field if you do not want to use the adapter's burned-in Ethernet address. The value entered must be a locally administered address with the format "X\*XXXXXXXXXX", where "X" is any hexadecimal digit and "\*" is 2, 6, A, or E.

If the NDIS 3 driver encounters an invalid network address, the invalid network address error message is posted.

The value entered is verified by the setup program when you click "OK" in the setup dialog box.

**I/O Base Address (ISA only)**

Select "Auto detect" if you want the NDIS 3.0 driver to search for an adapter. The driver will use the first adapter found that is not already in use by an earlier instance. The parameter may therefore be set to "Auto detect" for all instances.

If an I/O Base Address is specified, it must match the I/O settings on an installed adapter.

**Bus Number (ISA only)**

This parameter identifies the bus number, the adapter has been plugged into. For single bus architectures, this value should be 0.



---

## 7. Utilities

Three utilities are available on the Setup Disk:

- Adapter Information for Windows - AIW
- Novell SNMP Installation
- The Setup Program (Olicom Adapter Setup Program)

See the Olicom on-line for details about Novell SNMP Installation and the Olicom Adapter Setup Program

---

### Adapter Information for Windows - AIW

The AIW program displays information about the Ethernet Adapter itself and the driver from the Windows platform. By nature the AIW program is only available from Windows. The following information is available via AIW:

- Adapter type, version, serial number and configuration data
- Driver type, version and configuration data
- Driver statistics in numeric form
- System files
- Network traffic in graphic form
- How to contact Olicom Support and Sales Division
- Other Olicom products

The information is displayed on the screen and the configuration data be saved in a file or printed out.

---

### System Requirements

- Microsoft Windows v. 3.1 or higher
- An Olicom DMI enabled driver:  
OCE3XODI.COM (DOS ODI driver) or  
OCE3XND2.DOS (NDIS 2.0 DOS driver)

---

### Installation

AIW is installed using "RUN" and "SETUP" used by most Windows programs.

➡ **Note:** De-activate any running Windows programs before starting the installation. Once the AIW program is installed, the required programs may be re-activated.

1. Insert Disk 1.

2. Select “Run” and enter:

A:\AIWSETUP

3. Follow the instructions to complete the installation. The installation process creates a new program group with two AIW icons: one for the AIW program and one for the help file.

---

## Activation

1. Double-click on the AIW icon to activate the AIW program. Six large buttons are displayed.
2. Click on any of the buttons labelled “Hardware”, “Software”, “System Files”, “Statistics”, “Adapter Traffic” and “Olicom” to retrieve system information. The “Driver System Log” is located under “Statistics”.
3. For more details about the AIW options, select the “Help” menu or press <F1>.

---

## De-installation

If required, delete the AIW application from the hard disk by manually deleting the files originally installed via the AIW SETUP program.

Files in the C:\WINDOWS\SYSTEM directory:

VBRUN300.DLL, CMDIALOG.VBX, MSOUTLIN.VBX, PICCLIP.VBX  
SPIN.VBX and THREED.VBX



**Caution:** Be very careful about deleting these files! Other programs installed on the computer may also rely on the presence of these files!

Files in the installation directory (C:\AIW):

AIW.EXE, AIW.HLP, AIW.INI, OLIAIW.DLL, SETUPKIT.DLL and VER.DLL



---

## 8. Troubleshooting

If you encounter a problem with your Ethernet Adapter, use the Olicom Diagnostics program DIAG to isolate and resolve the problem.

---

### Frequently Asked Questions - FAQs

Find below frequently asked questions and how to tackle them.

**Diagnostics are OK, but the network connection fails..**

- A. Make sure the cable is securely connected.
- B. Verify that you are connected to the same network as the server.  
Ask your network administrator.

**The adapter stopped working when another adapter was installed in the PC.**

- A. Make sure that the cable is connected to the ISA Adapter and not another device.
- B. Reset the adapter, by turning off the power and turning the power back on after a couple of moments.
- C. Ensure that the adapter is firmly seated in.
- D. Move the adapter to another I/O location.

**The adapter stopped working for no apparent reason.**

- A. Reset the adapter, by turning off the power and turning the power back on after a couple of moments.
- B. Try moving the adapter to a different slot
- C. Reinstall the adapter drivers.
- D. Try installing another adapter

**You are informed: "No adapter found".**

- A. Use the driver delivered on the diskette with the adapter. If you have two drivers with the same name, check the time stamp on the files and use only the newest driver.
- B. Set the ISA adapter to "PnP auto" mode, and then manually configure the I/O address and IRQ settings.

**After adapter installation the PC prompts for a Plug and Play file for the adapter.**

Ignore the request and proceed. A Plug and Play file is not required to configure the ISA Adapter.

**Diag program reports: “Error reading adapter configuration from EEPROM”**

There are two possible causes for this error message:

1. Two (or more) Ethernet Adapters with same I/O address have been installed at the same time.
  - A. Power off machine.
  - B. Remove all but one ISA Adapter.
  - C. Rerun the Diag Program to make sure that one adapter functions.
  - D. Before reinserting the other ISA Adapter(s) in the machine, change the I/O address of the adapter so that it no longer conflicts with the other adapters. The I/O address can be changed using the Setup Program.
  - E. Reinsert the other adapters, making sure that no two adapters are configured to the same I/O address.
2. The configuration stored in the EEPROM has been corrupted. This can happen only if you did not follow the above steps and tried to configure multiple adapters with the same I/O address.
  - A. Run either the Diag Program or the Setup Program.

**The driver reports: “Error reading serial EEPROM” or “EEPROM checksum error. Run diagnostics”**

See Diag program reports: “Error reading adapter configuration from EEPROM”

**The Setup Program reports “An error has occurred while reading the contents of the adapter EEPROM”**

See Diag program reports: “Error reading adapter configuration from EEPROM”

---

## **Everything has been tried! What now?**

If you cannot resolve the problem, write down the encountered error message(s) and retrieve as much information as possible about your system configuration (drivers, PC brand and model, operating system, network operating system, etc.). Contact Olicom Support when you have collected this information.



## 9. Getting in Touch with Technical Support

If support is not provided by your organization or the local vendor, you can at any time relay information or contact Olicom Technical Support via one of the listed services. In addition, BBS, E-mail, FTP or WWW provide up-to-date software updates, application notes, quick fixes, FAQs (Frequently Asked Questions) and various utilities which may solve your problem.

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### Before you contact Olicom Technical Support

- Run the adapter diagnostics and write down the message(s) . . . . . ☐
- Simplify the environment by removing memory managers, etc. . . . . ☐
- Change the configuration if you suspect a resource conflict . . . . . ☐
- Remove other devices one by one to detect a possible conflict . . . . . ☐
- Fill in as much as possible in the included Problem Report Form . . . . . ☐

---

### Hotline Support

Call the following numbers for help with *any* problem you may encounter when installing Olicom software and hardware products:

**Europe:** This service is open Monday to Friday from 8 am to 6 pm CET.

Telephone: (+45) 45 27 01 02

**USA:** This service is open 24 hours a day, 7 days a week.

Telephone: 1-800-OLICOM-1 or (+1) (214) 516-4638

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### FAX Support

For assistance with *any* problem you may encounter when installing Olicom software and hardware products, Olicom's Support department will reply either by FAX or by telephone within 24 hours, Monday to Friday.

**Europe:** FAX: (+45) 45 27 02 40

**USA:** FAX: (+1) (214) 516 0640

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### Bulletin Board Service

All Olicom's support services are available via our BBS: software updates, application notes, quick fixes, various utilities, etc.

To contact our Bulletin Board Service (BBS) the following is required:

Modem speed: 2400/4800/7200/9600/12K/14.4k bps

Modem standard: CCITT V21/V22/V22bis/V32/V42bis/HST/MNP5

Parity: N (none)

Databits: 8

Stop bits: 1

Files can be downloaded using one of the following transfer protocols:

Zmodem, Xmodem, Ymodem and Sealink.

**Europe:** Telephone: (+45) 45 27 01 00 (and create your own account).

**USA:** Telephone: (+1) 214 422 9835

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## CompuServe®

Available via CompuServe are: software updates and FAQs (frequently-asked questions).

Type "GO OLICOM" after login.

Dial the following numbers for information about CompuServe®:

**Europe:** Telephone: (+44) 117 925 5111

**USA:** Telephone: (614) 457-0802

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## Internet E-Mail

Olicom customer support is available on E-Mail through Internet. Use one of the following addresses:

**Europe:** support@olicom.dk

**USA:** support@olicom.com

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## Anonymous Internet FTP Server

All Olicom's support services can be obtained from our anonymous FTP server: software updates, application notes, quick fixes, etc. To connect, open an FTP session to:

**Europe:** ftp.olicom.dk

**USA:** ftp.olicom.com

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## Internet World Wide Web Server (WWW)

The Olicom WWW server contains up-to-date information about Olicom Products, newsletters and press releases. It also contains addresses of all Olicom offices and support centers worldwide.

Our software library contains the latest adapter driver revisions, FAQs, quick fixes, etc. The WWW server can be accessed using these URL Addresses:

**Europe** http://www.olicom.dk

**USA** http://www.olicom.com



## Problem Report Form

Fill in both sides of this Problem Report Form, print out the relevant system configuration files and FAX/mail to Olicom Technical Support: (+45) 45 27 02 40

### Problem Description

### Network Information

| Adapter Information                                     |                                    |                                      |
|---------------------------------------------------------|------------------------------------|--------------------------------------|
| Adapter type                                            |                                    |                                      |
| ECO level and serial number (see labels on the adapter) |                                    |                                      |
| I/O address                                             |                                    |                                      |
| Interrupt                                               |                                    |                                      |
| Driver Information                                      |                                    |                                      |
| Driver disk                                             |                                    |                                      |
| Operating system                                        |                                    |                                      |
| Network OS                                              |                                    |                                      |
| Driver name                                             |                                    |                                      |
| Version (usually same as file time stamp)               |                                    |                                      |
| PC Information                                          |                                    |                                      |
| PC type                                                 |                                    |                                      |
| PC vendor/model                                         |                                    |                                      |
| Bus type/processor                                      |                                    |                                      |
| Memory                                                  |                                    |                                      |
| Additional boards                                       |                                    |                                      |
| BIOS version                                            |                                    |                                      |
| Motherboard rev.                                        |                                    |                                      |
| Print out and attach these configuration files:         |                                    |                                      |
| CONFIG.SYS                                              | for workstation and OS/2 servers.  | Check here: <input type="checkbox"/> |
| AUTOEXEC.BAT                                            | for all workstations.              | Check here: <input type="checkbox"/> |
| PROTOCOL.INI                                            | for NDIS workstations and servers. | Check here: <input type="checkbox"/> |
| LANMAN.INI                                              | for NDIS workstations and servers. | Check here: <input type="checkbox"/> |
| IBMLAN.INI                                              | for NDIS workstations and servers. | Check here: <input type="checkbox"/> |
| DOSLAN.INI                                              | for NDIS workstations and servers. | Check here: <input type="checkbox"/> |
| @xxxxx.ADF                                              | for NetWare workstations.          | Check here: <input type="checkbox"/> |
| AUTOEXEC.NCF                                            | for NetWare servers.               | Check here: <input type="checkbox"/> |
| STARTUP.NCF                                             | for NetWare servers.               | Check here: <input type="checkbox"/> |
| MSD.EXE                                                 | for all Windows configurations.    | Check here: <input type="checkbox"/> |

Name: \_\_\_\_\_ Company: \_\_\_\_\_

Address: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone/FAX: \_\_\_\_\_



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## Appendix A. Abbreviations

|                |                                                     |
|----------------|-----------------------------------------------------|
| <b>BIA</b>     | Burned-in Address                                   |
| <b>BIOS</b>    | Basic Input Output System                           |
| <b>CPU</b>     | Central Processing Unit                             |
| <b>DLC</b>     | Data Link Control                                   |
| <b>DMA</b>     | Direct Memory Access                                |
| <b>DOS</b>     | Disk Operating System                               |
| <b>EEPROM</b>  | Electrically Erasable Programmable Read-Only Memory |
| <b>LAN</b>     | Local Area Network                                  |
| <b>LAPS</b>    | LAN Adapter Protocol Support                        |
| <b>LED</b>     | Light Emitting Diode                                |
| <b>LLC</b>     | Logical Link Control                                |
| <b>MAC</b>     | Media Access Control                                |
| <b>MCA</b>     | Micro Channel Architecture                          |
| <b>NDIS</b>    | Network Driver Interface Specification              |
| <b>NetBIOS</b> | Network Basic Input Output System.                  |
| <b>NIC</b>     | Network Interface Card (= Adapter)                  |
| <b>NOS</b>     | Network Operating System                            |
| <b>NT</b>      | New Technology                                      |
| <b>ODI</b>     | Open Data-Link Interface                            |
| <b>OS/2</b>    | Operating System /2                                 |
| <b>PnP</b>     | Plug and Play                                       |
| <b>PROM</b>    | Programable Read Only Memory                        |
| <b>PS/2</b>    | Personal System /2                                  |
| <b>RAM</b>     | Random Access Memory                                |
| <b>RPL</b>     | Remote Program Load                                 |
| <b>VLM</b>     | Virtual Loadable Module                             |



---

## Appendix B. Driver Messages

This appendix describes driver messages and return codes that may appear during installation and operation of the Ethernet 10/100 Adapter and the network operating system or support program:

**Section B.1 Microsoft/IBM NDIS 2.0 MAC Driver.** Describes error messages generated by the NDIS 2.0 driver.

**Section B.2 Microsoft NDIS 3.0 Miniport Driver,** describes error messages generated by the NDIS 3.0 driver.

**Section B.3 DOS ODI Driver** describes errors generated by the DOS ODI driver

**Section B.4 OS/2 ODI Error Messages** describes errors generated by the OS/2 ODI driver

**Section B.5 NetWare Server ODI Driver** describes errors generated by the server driver

**Section B.6 Diagnostics Error Messages**

## B.1 Microsoft/IBM NDIS 2.0 MAC Driver

This text describes the possible error messages displayed by the NDIS 2.0 driver, OCE3XND2.DOS and OCE3XND2.OS2, during driver initialization of the Ethernet Adapter.

When you boot your system, a number of messages may be displayed on the screen. Some messages are for information only and some are information about errors.

During driver load, one of the following texts is displayed:

```
DOS NDIS 2.02: MAC Driver for Ethernet ISA/MCA 10/100 Adapters,
vx.xx, (yyymmdd)
Copyright 1996 Olicom A/S. All Rights Reserved.
OC-23xx MAC driver installed. Using I/O address xxxxx-xxxxx, IRQ yy.
100 Mbps, Half duplex operation detected.
```

OR

```
OS/2 NDIS 2.02: MAC Driver for Ethernet ISA/MCA 10/100 Adapters,
vx.xx, (yyymmdd)
Copyright 1996 Olicom A/S. All Rights Reserved.
OC-23xx MAC driver installed. Using I/O address xxxxx-xxxxx, IRQ yy.
100 Mbps, Half duplex operation detected.
```

The following messages may be displayed by the driver:

```
OC-23xx MAC driver installed. Using I/O address xxxxx-xxxxx.
    The driver has been loaded successfully. The I/O addresses used are displayed by the
    driver, where xxxxx-xxxxx is the I/O addresses used, for example 300h-31Fh.
```

**Failure: Protocol.ini does not have a valid DRIVENAME**

The PROTOCOL.INI file is either missing an entry for DRIVENAME or the DRIVER-NAME parameter is not correct in the Ethernet section. Verify, that the line "DRIVER-NAME = OCE3X\$" is present in your PROTOCOL.INI. See the PROTOCOL.INI located in the \MSLANMAN.DOS\DRIVERS\ETHERNET\OCE3X directory on the Driver Disk.

**Failure: Could not find adapter at specified IOBASE.**

The driver could not find an adapter at the address specified by the IOBASE keyword in the OCE3X section of the PROTOCOL.INI file. Note that IOBASE need only be specified if you have more than one Ethernet Adapter in your computer. NOTE: If you have a Plug and Play BIOS or Plug and Play configurator loaded in your CONFIG.SYS, you should omit the keyword as the adapter may be moved to a new I/O base address by the Plug and Play BIOS/configurator.

**Failure: No adapters found.**

The driver could not find an Ethernet Adapter at any valid I/O address. If the IOBASE keyword is not present in the OCE3X section in the PROTOCOL.INI file, the driver will search for an adapter at all valid I/O addresses. If no adapters are found at any of the valid I/O addresses, this message is displayed. Otherwise, the driver will inform you of the I/O address where the adapter was found in the MAC Driver installed information string.

**Failure: Invalid IOBASE specified in Protocol.ini.**

The IOBASE parameter is present in the OCE3X section of the PROTOCOL.INI file, but the parameter specified is not valid. Remove the IOBASE entry in PROTOCOL.INI or change the IOBASE parameter to a legal value. If the IOBASE entry is present in PROTOCOL.INI, the value must match the I/O address setting for an installed adapter.

The following message only applies to the OS/2 driver, OCE3XND2.OS2:

**Failure: Unable to allocate GDT, driver not loaded.**

This error indicates that the system does not have sufficient free resources to load the OCE3XND2.OS2 driver. You should free some resources by removing unneeded drivers from your CONFIG.SYS file.

---

## B.2 Microsoft NDIS 3.0 Miniport Drivers

The NDIS 3.0 error messages reported under Microsoft Windows for Workgroups 3.11, Microsoft Windows 95 and Microsoft Windows NT are identical. However, the way the errors are reported to the user differs.

---

### B.2.1 Windows 95

In Windows 95 error codes reported by NDIS 3.0 Miniport drivers are written to the NDISLOG.TXT file located in your Windows directory.

An example of an error message reported by the NDIS driver could be:

```
Olicom Ethernet ISA 10/100 Adapter (0000). Error Code=0XC000138B,  
0X00000011, 0X00000000, 0XC0FDA528, 0X00000000
```

The text "0XC000138B" describes the error and refers to a specific error code, listed below. Ignore the leading "0XC000" (resulting in error code 138B for the example above - Adapter not found).

If you experience any problems, you should make a backup copy of the NDISLOG.TXT file before restarting Windows 95.

---

### B.2.2 Windows NT

When running Windows NT, NDIS 3.0 Miniport driver errors are reported using the Event Log. This log can be examined using the Event Viewer located in the Administrative Tools window.

If you experience any problems with the network, check if any error messages or warnings are posted by the driver by using the Event Viewer found in the Administrative Tools window. All error messages and/or warnings posted by the Olicom driver have the Source field set to OCE3XM. System error messages, related to the Olicom driver, may occur with different source names, for example "Service Control Manager".

The messages are listed according to Event field and are described below in Event number order. Display the message description by highlighting the message and press <Enter>.

If you experience any problems, write down the "Event ID", "Source", "Description" and "Data" fields in the "Event Detail" window.

## B.2.3 NDIS 3.0 Miniport Driver Error Messages

For each error message below, the first line contains the error code used by Windows 95. The second line contains the "Event ID" and "Data" fields used by Windows NT.

### Code Description

#### 1388 Resource Conflict

5000 OCE3XM: Has encountered a conflict in resources and could not load.

Action: Check the resources used by the network adapter(s) to ensure, that no conflicts exists.

#### 1389 Out of Resources

5001 OCE3XM: Could not allocate the resources necessary for operation

Action: The driver failed to load, because it tried to allocate too many resources. Decrease the number of receive and/or transmit buffers and retry the operation.

#### 138A Hardware Failure

5002 OCE3XM: Has determined that the adapter is not functioning properly.

Action: The adapter could not be found or is not working properly. Check I/O base settings and retry the operation.

#### 138B Adapter Not Found

5003 OCE3XM: Could not find an adapter.

Action: The adapter could not be found by the MAC driver. Check I/O base settings and retry the operation. If more than one adapter is used check the EID-parameter.

#### 138C Interrupt Connect

5004 OCE3XM: Could not connect to the interrupt number supplied.

Action: The interrupt is already used by another device. Change the adapter interrupt number and retry the operation.

#### 138D Driver Failure

5005 OCE3XM: Has encountered an internal error and has failed.

Action: An internal error has been discovered. Contact your place of purchase.

#### 138E Bad Version

5006 OCE3XM: The version number is incorrect for this driver.

Action: The driver version is incorrect. Contact your place of purchase.

#### 138F Time out

5007 OCE3XM: Timed out during an operation.

Action: A time-out error occurred. Contact your place of purchase.

#### 1390 Network Address

5008 OCE3XM: Has encountered an invalid network address.

Action: An invalid network address was specified. Change the locally administered network address and restart your system. The driver uses the burned-in address when loading.



**1393 Missing Configuration Parameter**

**5011 OCE3XM: A required parameter is missing from the Registry.**

Action: A parameter necessary for operation has been omitted in the registry. Use the Network Setup to set proper parameters.

**1396 Adapter Disabled**

**5014 OCE3XM: The adapter is disabled. The driver cannot open the adapter.**

Action: Make sure the Olicom adapter driver is properly installed. Remove the adapter and install it again using the method described in this help file.

See also the troubleshooting section for further information on how to enable the adapter.

**1397 I/O Port Conflict**

**5015 OCE3XM: There is an I/O port conflict.**

Action: The ports used by the MAC driver is already in use by another device. Change the I/O address for the adapter.

**1398 Port or DMA Conflict**

**5016 OCE3XM: There is an I/O port or DMA channel conflict.**

Action: Check the I/O address and DMA usage by the adapter to ensure that there is no resource conflicts.

**139A Interrupt Conflict**

**5018 OCE3XM: There is a interrupt conflict at interrupt number XX.**

Action: Change the interrupt selection on the adapter and re-try the operation.

---

## B.3 DOS ODI Driver Error Messages

This text describes the possible error messages displayed by the DOS ODI driver, OCE3XODI.COM.

**OCE3XODI-DOS-1 The LSL is not loaded.**

Load the LSL or see the Novell NetWare documentation.

**OCE3XODI-DOS-2 The LSL has no more room for a board using Frame <frame>.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-3 Could not find OCE3XODI MLID to unload.**

See the Novell NetWare documentation.

**OCE3XODI-DOS-4 A TSR is loaded above the OCE3XODI MLID.**

IPXODI, NETX or VLM are probably loaded. Unload these program before unloading OCE3XODI. See the Novell NetWare documentation.

**OCE3XODI-DOS-5 OCE3XODI MLID could not be unloaded; the operation was aborted.**

As stated.

**OCE3XODI-DOS-6 The adapter did not initialize. OCE3XODI did not load.**

Run the DIAG program.

Contact your place of purchase if the error condition persists.

**OCE3XODI-DOS-7 You need another MLID Section Heading in the NET.CFG file in order to load the MLID again.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-8 A NET.CFG is required to load the MLID again.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-9 The NET.CFG entry has been ignored.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-11 The MLID does not support frame <frame>.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-12 The protocol keyword must have a frame type. Entry ignored.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-13 The MLID could not register Protocol ID for protocol stack <stack> for frame type <frame>.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-14 This version of LSL is not supported.**

Use v. 2.14 or higher.

**OCE3XODI-DOS-15 The frame type is already activated for frame <frame>.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-16 The node address was incorrectly specified in NET.CFG.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-17 An invalid keyword was specified in NET.CFG on line <line>.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-18 The frame type specified in the NET.CFG is not supported.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-19 An invalid Ethernet node address is specified in NET.CFG. The MLID modified the incorrect address bits.**

Locate and fix the error in NET.CFG. See also the NetWare documentation.

**OCE3XODI-DOS-20 This version of the statistics table is not supported.**

See the Novell NetWare documentation.

**OCE3XODI-DOS-21 A program hooked Int 2F after the OCE3XODI MLID.**

IPXODI, NETX or VLM are probably loaded. Unload these program before unloading OCE3XODI.

**OCE3XODI-DOS-51 This driver only supports AT or MCA class machines.**

The driver has detected that your PC does not conform with the AT or MCA specifications. Contact your place of purchase.

**OCE3XODI-DOS-52 Adapter not found.**

Check that the OC-2375/35 is properly inserted. If this does not solve the problem, check that all software components are properly installed. Then run the DIAG program. Contact your place of purchase if the error condition persists.

**OCE3XODI-DOS-53 Error accessing EEPROM on adapter.**

The driver has located the OC-2375/35 adapter in the system but cannot access its EEPROM. Check that the adapter is properly inserted. If this does not solve the problem, check that all software components are properly installed. Then run the DIAG program. Contact your place of purchase if the error condition persists.

**OCE3XODI-DOS-54 Adapter failed Built In Self Test.**

Check that the OC-2375/35 is properly inserted. If this does not solve the problem, check that all software components are properly installed. Then run the DIAG program. Contact your place of purchase if the error condition persists.

**OCE3XODI-DOS-55 The Media could not be selected.**

The media type selected with DIAG or via keywords cannot be selected. Remove any keywords from the NET.CFG file and try again. If this does not solve the problem, then run the DIAG program.

**OCE3XODI-DOS-56 Adapter must be inserted in a 16 bit slot.**

Move your adapter to a 16 bit slot.

**OCE3XODI-DOS-57 Invalid Burned In Address or checksum.**

Run the OC-2375/35 DIAG program.

**OCE3XODI-DOS-59 I/O port address in NET.CFG is invalid.**

Locate and fix the error in NET.CFG See also the netware documentation.

**OCE3XODI-DOS-72 INT parameter read from adapter is invalid.**

Check that the OC-2375/35 is properly inserted. Then run the DIAG program.  
Contact your place of purchase if the error condition persists.

**OCE3XODI-DOS-80 The Media could not be AUTO detected.**

The media could not be automatically detected. Check that the cable is properly attached.  
Then run the DIAG program.

**OCE3XODI-DOS-81 Cable appears to be disconnected.**

Check that the cable is connected. If this does not solve the problem, then run the DIAG program.

## B.4 OS/2 ODI Error Messages

OCE3XODI.SYS OS/2 ODI Driver may generate the following warnings and error messages:

**OCE3XODI-OS/2 Attempt to add MLID protocol ID failed.**

There is to little memory in the computer.

**OCE3XODI-OS/2 Attempt to allocate memory for Virtual Boards failed.**

There is to little memory in the computer.

**OCE3XODI-OS/2 LSL support module not installed.**

Make sure the Novell LSL.SYS is loaded in CONFIG.SYS  
See also the Netware documentation.

**OCE3XODI-OS/2 This driver only supports AT or MCA class machines.**

The driver has detected that your PC does not conform with the AT or MCA specifications.  
Contact your place of purchase.

**OCE3XODI-OS/2 This driver only supports 386 processors or higher.**

Make sure that the PC is a 386+.

**OCE3XODI-OS/2 Error installing interrupt handler.**

Try configuring the adapter with another interrupt request level.

**OCE3XODI-OS/2 Adapter not found.**

Check that the OC-2375/35 is properly inserted. If this does not solve the problem, check that all software components are properly installed. Then run the DIAG program.  
Contact your place of purchase if the error condition persists.

**OCE3XODI-OS/2 Error accessing EEPROM on adapter.**

The driver has located the OC-2375/35 adapter in the system but cannot access its EEPROM. Check that the adapter is properly inserted. If this does not solve the problem, check that all software components are properly installed. Then run the DIAG program.  
Contact your place of purchase if the error condition persists.

**OCE3XODI-OS/2 Adapter failed Built In Self Test.**

Contact your place of purchase.

**OCE3XODI-OS/2 The Media could not be selected.**

The media type selected with DIAG or via keywords cannot be selected. Remove any keywords from the NET.CFG file and try again. If this does not solve the problem, then run the DIAG program.

**OCE3XODI-OS/2 Adapter must be inserted in a 16 bit slot.**

Move your adapter to a 16 bit slot.

**OCE3XODI-OS/2 Invalid Burned In Address or checksum.**

Run the OC-2375/35 DIAG program.

**OCE3XODI-OS/2 I/O port address in NET.CFG is invalid.**

Locate and fix the error in NET.CFG See also the NetWare documentation.

**OCE3XODI-OS/2 INT parameter from adapter is invalid.**

Check that the OC-2375/35 is properly inserted. Then run the DIAG program.  
Contact your place of purchase if the error condition persists.

**OCE3XODI-OS/2 The Media could not be AUTO detected.**

The media could not be automatically detected. Check that the cable is properly attached.  
Then run the DIAG program.

**OCE3XODI-OS/2 Cable appears to be disconnected.**

Check that the cable is connected. If this does not solve the problem, then run the DIAG program.

**OCE3XODI-OS/2 Invalid Node Override, Group Address bit was set now reset.**

The NET.CFG file specifies an illegal Node Address

**OCE3XODI-OS/2 Invalid Node Override, Local Administrated bit was reset now set.**

The NET.CFG file specifies an illegal Node Address

---

## B.5 NetWare Server ODI Driver

The OCE3XODI.LAN driver may generate the following error messages.

**OCE3XODI-NW-50 Adapter not found.**

Check that the OC-2375/35 is properly inserted. If this does not solve the problem, check that all software components are properly installed. Then run the DIAG program. Contact your place of purchase if the error condition persists.

**OCE3XODI-NW-51 Unable to determine interrupt level.**

Check that the OC-2375/35 is properly inserted. Then run the DIAG program. Contact your place of purchase if the error condition persists.

**OCE3XODI-NW-52 Unable to locate configuration.**

Should never occur. Contact place of purchase.

**OCE3XODI-NW-53 Adapter must be inserted in a 16 bit slot.**

Move your adapter to a 16 bit slot.

**OCE3XODI-NW-57 Adapter failed Built In Self Test.**

Should never occur. Contact your place of purchase.

**OCE3XODI-NW-58 Error accessing EEPROM on adapter.**

The driver has located the OC-2375/35 adapter in the system but cannot access its EEPROM. Check that the adapter is properly inserted. If this does not solve the problem, check that all software components are properly installed. Then run the DIAG program. Contact your place of purchase if the error condition persists.

**OCE3XODI-NW-59 The Media could not be selected.**

The media type selected with DIAG or via keywords cannot be selected. Remove any keywords from the NET.CFG file and try again. If this does not solve the problem, then run the DIAG program.

**OCE3XODI-NW-60 The Media could not be AUTO detected.**

The media could not be automatically detected. Check that the cable is properly attached. Then run the DIAG program.

---

## B.6 Diagnostics Error Messages

If errors are detected, make sure that:

- The cabling matches the current test mode
- The cabling is properly connected
- The connectors are free of physical damage
- No resource conflicts are present (I/O address range, interrupt level, etc.)

➡ **Note:** Running the test on a heavily loaded network may cause the Transmit/Receive test to report errors.

Whenever an error is detected by the diagnostics program, an error message is displayed on the screen. These messages are self-explanatory, meaning that next to the error message you will find a more detailed description **AND** suggestions to solving the error condition.

For this reason you will not find diagnostics error messages and suggested actions in this publication.

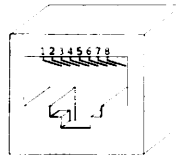




# Appendix C. Technical Information

## OC-2375 Ethernet ISA 10/100 Adapters

**Controller:** National Semiconductor DP83800  
**Media connectors:** 8-pin RJ-45 for UTP with on-board media filter



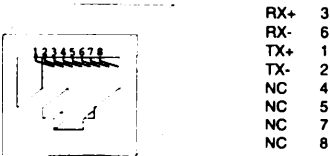
|     |   |
|-----|---|
| RX+ | 3 |
| RX- | 6 |
| TX+ | 1 |
| TX- | 2 |
| NC  | 4 |
| NC  | 5 |
| NC  | 7 |
| NC  | 8 |

**Figure 7. RJ-45 Connector Configuration**

**Power requirements:** Max. 4.5 Watts @ +5 Volt DC  
**Operating temperature:** +10°C to +40°C  
**Humidity (relative):** 8% to 80% non-condensing  
**Size:** 162 x 86 mm (6.4" x 3.4")  
**On-board memory:** 8 Kbyte  
**Network Interface:** 10Base-T  
 100Base-TX  
**Certification:** FCC Part 15, subpart B,  
 EN55022, Class B (CISPR 22, Class B)  
 EN50082-1  
 EN60950  
**I/O window:** 32 bytes  
**Data Path Width:** 16 bit  
**Data Transfer:** PIO  
**Interrupt Level:** Any level assigned by the system  
**LED Indicators:** Light green "100" LED. ON/OFF = 100/10 Mbps  
 Dark green "LINK" LED. ON = Link  
 Yellow "ACTIVITY" LED. ON = Receiving

# OC-2335 Ethernet MCA 10/100 Adapter

**Controller:** National Semiconductor DP83800  
**Media connector:** 8-pin RJ-45 for UTP with on-board media filter



**Figure 8. RJ-45 Connector Configuration**

**Power requirements:** 5.5 Watts @ +5 Volt DC  
**Operating temperature:** +10°C to +40°C  
**Humidity (relative):** 8% to 80% non-condensing  
**Size:** 162 x 88 mm (6.4" x 3.5")  
**On-board memory:** 8 Kbyte  
**Network Interface:** 10Base-T  
100Base-TX  
**Certification:** FCC Part 15, subpart B,  
EN55022, Class B (CISPR 22, Class B)  
EN50082-1  
EN60950  
**I/O window:** 32 bytes  
**Data Path Width:** 16 bit  
**Data Transfer:** PIO  
**Interrupt Level:** Any level assigned by the system  
**LED Indicators:** Dark green "100" LED. ON/OFF = 100/10 Mbps  
Light green "LINK" LED. ON = Link  
Yellow "ACTIVITY" LED. ON = Receiving



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